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(54) Title: NEW GLASS MATERIAL AND METHOD OF PREPARING SAID GLASS

(57) Abstract: Abstract The invention relates to nitride glass with the general formula axbygz, wherein a is a glass modifier comprising at least one electropositive element, b comprises Si, B, Ge, Ga and/or Al, and g is N or N together with O, whereby the atomic ratio of O:N is in the interval from 65:35 to 0:100, a method for preparing a nitride glass and the use of the glass. The results clearly shows that the physical and mechanical properties of oxide glasses such as hardness, elastic modulus, fracture toughness, and glass transition temperature are improved/increased, when the atomic structure of the network is strengthened by replacing oxygen atoms bAbstract The invention relates to nitride glass with the general formula axbygz, wherein a is a glass modifier comprising at least one electropositive element, b comprises Si, B, Ge, Ga and/or Al, and g is N or N together with O, whereby the atomic ratio of O:N is in the interval from 65:35 to 0:100, a method for preparing a nitride glass and the use of the glass. The results clearly shows that the physical and mechanical properties of oxide glasses such as hardness, elastic modulus, fracture toughness, and glass transition temperature are improved/increased, when the atomic structure of the network is strengthened by replacing oxygen atoms by nitrogen-atoms. Further, the results show that a very high refractivity index could be achieved.

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